

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application No. 10/555,729

Applicant: Nie et al.

Filed: November 7, 2005

TC/AU: Unassigned

Examiner: Unassigned

Docket No.: 239659 (Client Reference No. 0215-US)

Customer No.: 23460

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 and/or Substitute Form PTO-1449 ("Form 1449") are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner place his or her initials in the appropriate area on the enclosed Form 1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form 1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

The Information Disclosure Statement is being filed:

- ☒ **within** any one of the following time periods: (a) within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d); (b) within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 of an international application; (c) before the mailing date

of a first Office Action on the merits; or (d) before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

- ☐ **after** (a), (b), (c) or (d) above, but before the mailing date of a final action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and includes *one* of:
- ☐ the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below).
- or*
- ☐ the fee of \$180 set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a final action under 37 CFR 1.113 or a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and on or before payment of the issue fee, and includes the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a Notice of Allowance under 37 CFR 1.311, and on or before payment of the issue fee, and **within** thirty days of receiving each item of information contained in the Information Disclosure Statement, and includes the Statement under 37 CFR 1.704(d) (see "Statement under 37 CFR 1.704(d)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).

NOTE: This is for original applications except applications for a design patent, filed on or after May 29, 2000, wherein a paper containing only an Information Disclosure Statement in compliance with 37 CFR 1.97 and 1.98 is being filed.

Copies of the References

- ☐ Copies of all of the references listed on the enclosed Form 1449 are enclosed herewith.
- ☒ Copies of U.S. patents and patent applications that are listed on the accompanying Form 1449 are not enclosed herewith. Copies of other references identified on the accompanying Form 1449 are enclosed herewith.
- ☐ Attached to each reference not in the English language is a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3). An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3).
- ☒ A copy of the foreign search report is enclosed herewith.
- ☐ The references listed on the enclosed Form 1449 were previously identified in the parent application(s) of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not

submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 CFR 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 USC 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		STATUS (<i>check one</i>)		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1.				
2.				
3.				

Statement under 37 CFR 1.97(e)

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby states that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

Statement under 37 CFR 1.704(d)

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

Fees

- ☒ **No fee** is owed by the applicant(s).
- ☐ Charge Deposit Account No. 12-1216 in the amount of **\$180.00** (37 CFR 1.17(p)).
(A duplicate copy of this communication is enclosed for that purpose.)

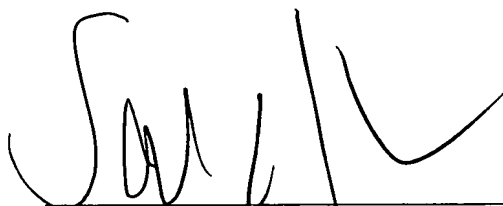
In re Appln. of Nie et al.
Application No. 10/555,729

Authorization to Charge Additional Fees

- ☒ If any additional fees are owed in connection with this communication, please charge Deposit Account No. 12-1216. (A duplicate copy of this communication is enclosed for that purpose.)

Instructions as to Overpayment

- ☒ Credit Account No. 12-1216.
☐ Refund



Salim A. Hasan, Reg. No. 38,175
LEYDIG, VOIT & MAYER, LTD.
Two Prudential Plaza, Suite 4900
180 North Stetson Avenue
Chicago, Illinois 60601-6780
(312) 616-5600 (telephone)
(312) 616-5700 (facsimile)

Date: May 12, 2006


CERTIFICATE OF MAILING

I hereby certify that this INFORMATION DISCLOSURE STATEMENT (along with any documents referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: May 12, 2006



Loraine Perry

Please type a plus sign (+) inside this box → 

Substitute for form 1449A/B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/555,729	
			Filing Date	November 7, 2005	
			First Named Inventor	Nie et al.	
			Group Art Unit	Unassigned	
			Examiner Name	Unassigned	
			Attorney Docket Number	239659	
Sheet	1		2	Client Reference No.	0215-US

U.S. PATENT DOCUMENTS						
Examiner Initials	Doc. No.	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Filing Date If Appropriate
		Application or Patent Number	Kind Code			
	AA	5,087,616		Meyers et al.	02/11/1992	
	AB	6,306,610		Bawendi et al.	10/23/2001	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Doc. No.	Foreign Patent Document			Name of Patentee or Applicant	Date of Publication	Translation	
		Office	Application or Patent Number	Kind Code			Yes	No**

OTHER - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.	Translation	
			Yes	No**
	AC	ALDANA et al., "Photochemical Instability of CdSe Nanocrystals Coated by Hydrophilic Thiols," <i>J. Am. Chem. Soc.</i> , 123, 8844-8850 (2001).		
	AD	ALIVISATOS, "Semiconductor Clusters, Nanocrystals, and Quantum Dots, <i>Science</i> , 271:5251, 933-37 (1996)		
	AE	ALIVISATOS, "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals," <i>J. Phys. Chem.</i> , 100, 13226-13229 (1996).		
	AF	BERNARD et al., "Electronic structure of ZnS, ZnSe, ZnTe, and their pseudobinary alloys," <i>Physical Review B</i> , 36:3, 3199-3228 (1987).		
	AG	CHAN et al., "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection," <i>Science</i> , 281, 2016-2018 (1998).		

Examiner Signature		Date Considered	
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* A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).
 + An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet

2

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Application Number

10/555.729

Filing Date

November 7, 2005

First Named Inventor

Nie et al.

Group Art Unit

Unassigned

Examiner Name _____

Unassigned

Attorney Docket Number

239659

Examiner
Initials

Doc.
No.

Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.

Translation

Yes

<p> Next </p>

A H	DABBOUSI et al., "(CdSe)ZnS Core-Shell Quantum Dots: Synthesis and Characterization of a Size Series of Highly Luminescent Nanocrystallites," <i>J. Phys. Chem., B</i> , 101: 9463-9475 (1997).
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AI	DE SMET et al., "Determination of Ostwad Ripening Rates from Dynamic Light Scattering Measurements," <i>Langmuir</i> , 15, 2327-2332 (1999).
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A J	HINES et al., "Synthesis and Characterization of Strongly Luminescing ZnS-Capped CdSe Nanocrystals." <i>J. Phys. Chem.</i> , 100, 468-71 (1996).
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AK	KORGEL et al., "Controlled Synthesis of Mixed Core and Layered (Zn,Cd)S and (Hg,Cd)S Nanocrystals within Phosphatidylcholine Vesicles," <i>Langmuir</i> , 16, 3588-3594 (2000).
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AL	LINK et al., "Alloy Formation of Gold-Silver Nanoparticles and the Dependence of the Plasmon Absorption on Their Composition." <i>J. Phys. Chem. B.</i> , 103, 3529-3533 (1999).
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A M	MALLIN et al., "Solution-Phase Synthesis of Sub-10 nm Au-Ag Alloy Nanoparticles," <i>American Chemical Society</i> , 2:11, 1235-1237 (2002).
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A N	MITCHELL et al., "Programmed Assembly of DNA Functionalized Quantum Dots," <i>J. Am. Chem. Soc.</i> , 121, 8122-8123 (1999)
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A O	MULVANEY, "Surface Plasmon Spectroscopy of Nanosized Metal Particles," <i>Langmuir</i> , 12, 788-800 (1996).
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A P	NIRMAL et al., "Fluorescence Intermittency in Single Cadmium Selenide Nanocrystals," <i>Nature</i> , 383, 802-804 (1996).
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A Q	PENG et al., "Epitaxial Growth of Highly Luminescent CdSe/CdS Core/Shell Nanocrystals with Photostability and Electronic Accessibility," <i>J. Am. Chem. Soc.</i> , 119, 7019-1029 (1997).
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AR	PENG et al., "Kinetics of II-VI and III-V Colloidal Semiconductor Nanocrystals Growth: 'Focusing' of Size Distributions," <i>J. Am. Chem. Soc.</i> , 120, 5343-5344 (1998).
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AS	PENG et al., "Formation of High-Quality CdTe, CdSe, and CdS Nanocrystals Using CdO as Precursor." <i>J. Am. Chem. Soc.</i> , 123, 183-184 (2001).
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AT	POON et al., "Relativistic band structure of ternary II-VI semiconductor alloys containing Cd, Zn, Se and Te," <i>J. Phys.: Condens. Matter</i> 7, 2783-2799 (1995).
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A U	TALAPIN et al., "Synthesis and surface modification of amino-stabilized CdSe, CdTe and InP nanocrystals." <i>Colloids Surf.</i> , 202, 145-154 (2002).
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AV	WEI et al., "First-principles calculation of band offsets, optical bowings and defects in CdS, CdSe, CdTe, and their alloys," <i>J. Appl. Phys.</i> , 87:3, 1304-1311 (2000).
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AW	WELLER, "Colloidal Semiconductor Q-Particle: Chemistry in the Transition Region Between Solid State and Molecules," <i>Angew. Chem. Int. Ed. Engl.</i> , 32, 41-53 (1993).
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A X	Search Report from International Patent Application No. PCT/US04/13119
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Date Considered

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